

PROKOPENKO, N.Ye

U S S R .

Effect of the decomposition products of lungs during tuberculosis on the oxidative processes of the kidney tissues. N.Ye. Prokopenko. *Trudy Inst. Tuberk. Akad. Med. Nauk S.S.S.R.* 27: 287-294, (9-10) (1953); *Referat. Zhur., Khim.* 1954, No. 23510. — The effect of aq. exts. prepd. from tuberculous lungs on respiration and oxidative deamination activity of the kidney tissues of normal rats has been investigated. The lung slurry was extd. by water (1:5) for 30 min. The ext. was sepd. from the residue by centrifugation and clarified by pptn. of the extd. proteins using cold 98% alc., thus giving a low-mol. protein-free fraction (I). The protein-contg. fraction (II) was obtained by extg. the lung tissue-residue with 1.5% NaCl (1:5) for 30 min. The absorption of O by kidney tissues was increased by I and decreased by II. In all cases of exptl. tuberculosis II depressed the deamination reaction. This process was increased by I only at the beginning of the illness, the reverse was true later on. The inhibitory effect on the deamination reaction presumably was due to the appearance of toxic sol. amines in the exts. prepd. from the lung tissues that were in a progressive phase of tuberculosis. Aq. exts. from caseous tubercles possessed a higher toxicity and showed less effect on oxidative deamination activity; exts. previously treated with H_2O lost their toxicity; aq. emulsions of the substances extd. by H_2O from the caseous tubercles inhibited totally the deamination reaction. E. Wierbicki.

PLATONOV, G.Ye., prof.; PROKOPENKO, N.Ye., kand.biologicheskikh nauk;
BLOKH, E.L., kand.biologicheskikh nauk

Changes in physiological processes following BCG vaccination
and infection with tuberculosis in experiments on animals.

Trudy Inst. tub. AMN 7:70-84 '58.

(MIRA 13:10)

(BCG VACCINATION) (METABOLISM)

PLATONOV, G.Ye., prof.; PROKOPENKO, N.Ye., starshiy nauchnyy sotrudnik

Change in the polysaccharide and protein fractions of the blood
in single dose and multiple dose BCG vaccination. Probl.tub. 39
no.2:78-86 '61. (MIRA 14:3)

1. Iz Instituta tuberkuleza AMN SSSR (dir. Z.A. Lebedeva).
(POLYSACCHARIDES) (BLOOD PROTEINS) (BCG VACCINATION)

ПРОКОПЕНКО, Н. Я. Е.

PLATONOV, G.Ye., professor; PROKOPENKO, N.Ye.; BLOKH, E.L.

Physiological principles of surgery of the nervous system in tuberculosis. Probl. tub. no.3:58-65 My-Je '54. (MLRA 7:11)

1. Iz Instituta tuberkuleza Akademii meditsinskikh nauk SSSR (dir. Z.A.Lebedeva)

(TUBERCULOSIS, PULMONARY, experimental,
eff. of vagotomy)

(NERVES, VAGUS, surgery,
eff. on exper. pulm. tuberc.)

PROKOPENKO, P.

"Nikolai Mamai" by M. Lazarev. Reviewed by P. Prokopenko.
Sov.shakht. 10 no.8:32 Ag '61. (MIRA 14:8)
(Mamai, Nikolai Iakovl'evich)
(Lazarev, M.)

Prokopenko, P.

PROKOPENKO, P., mayor.

Sergeant Plakhotnichenko, squad leader. Voen.-inzh. zhur. 101 no.10:
39-40 0 '57.

(MIRA 10:11)

(Plakhotnichenko, Aleksandr)

PROKOPENKO, P.I.

Work of drugstores. Farmatsev. zhur. 16 no.3:67-69 '61.
(MIRA 14:6)

1. Apteka No.86, g.Berdichev, Zhitomirskoy oblasti.
(BERDICHEV—DRUGSTORES)

PROKOPENKO, P. M.

Practical measures for the raising and conservation of valuable species of the Transcarpathian fauna. Nauk. zap. UzhGU 40:117-120 '59.
(MIRA 14:4)

1. Zakarpatskoye oblastnoye upravleniye lesnogo khozyaystva.
(Transcarpathia--Wildlife, Conservation of)

PROKOPENKO, P.P.

Electric heating apparatus for heating petroleum in tank cars.
Transp. i khran.nefti no.6:33-35 '63. (MIRA 17:3)

1. Leningradskoye upravleniye Glavnogo upravleniya po
transportu i snabzheniyu neft'yu i nefteproduktami RSFSR.

PROKOPENKO, P.T.

Scientific and Technical Society of the Food Industry of
the Ukraine strives for technical progress. Khar. prom.
no.4:13-15 O-D '65. (MIRA 18:12)

PROKOPENKO, R. K.

NIKITIN, V. V.; PROKOPENKO, R. K.

Materials on the enteric physiology of the Chinese tussock moth
(*Antheraea pernyi* G. M.) [with summary in English]. Ukr. biokhim.
zhur. 29 no. 3:329-339 '57. (MLRA 10:9)

1, Kafedra fiziologii cheloveka i zhivotnykh Khar'kovskogo
gosudarstvennogo universiteta.
(SILKWORMS) (PROTEIN METABOLISM)

PROKOPENKO, S.

Pneumatic handling and separating of grain at the state grain
mill. Muk.-elev.prom. 22 no.3:23-24 Mr '56. (MIRA 9:7)

1.Zaporozhskaya mel'nitsa No.1 Sel'khozmuromol'ya.
(Zaporozh'ye Province—Flour mills) (Grain-handling machinery)

PROKOPENKO, S.

PROKOPENKO, S.

Hydraulic truck dumper. Muk.-elev.prom. 21 no.2:28 F '55.
(MLRA 8:3)

1. Zaporozhskaya mel'nitsa No.1 obmel'tresta.
(Dumping appliances)

CHUDIN, Aleksey Prokof'yevich; PROKOPENKO, Sergey Andreyevich;
PONOMAREV, S.F., red.; IZHBOLDINA, S.I., tekhn.red.

[Modernization of metal-cutting machines used in mass production] Modernizatsia metallorezhushchikh stankov v massovom proizvodstve. Stalingrad, Stalingradskoe knizhnoe izd-vo, 1959. 31 p. (MIRA 13:5)
(Cutting machines) (Machinery in industry)

PROKOPENKO, S.F.; BURD, V.S.; PETRUKHA, Ye.I.

A new method of spraying field crops. Zashch. rast. ot vred.
i bol. 7 no.1:17-18 '62. (MIRA 15:6)
(Spraying and dusting)

PROKOPENKO, S.F.; PODSHIVALOV, V.S.; KUZ'MINA, M.M.

Spraying herbicides by the method of lateral blasting. Zashch.
rast. ot vred. i bol. 8 no.4:36 Ap '63. (MIRA 16:10)

(Spraying and dusting in agriculture)
(Weed control)

PRYKOPENKO, S.F., kand. sel'skokhoz. nauk

Small volume blower-type spraying of field crops. Mashch. rast.
ot vred. i bol. 9 no.6325-27 '64 (MIRA 1737)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sel'skokhoz-
yaystvennogo mashinostroyeniya.

PROKOPENKO, S., kand.sel'skokhoz.nauk

What an orchard sprayer should be like. Zashch.rast.ot vred.i bol.
10 no.4:14-15 '65. (MIRA 18:6)

L 50549-65

ACCESSION NR: AP5011493

UR/0348/65/000/001/0028/0029

AUTHOR: Prokopenko, S. (Candidate of agricultural sciences)

TITLE: Accept lower quantities of liquid consumption

SOURCE: Zashchita rasteniy ot vreditel'ey i bolezney, no. 1, 1965, 28-29

TOPIC TAGS: agriculture, pesticide, toxin, toxic substance, liquid atomization/
2.4 D herbicide

ABSTRACT: Even though sprinkling at the rate of 25 liters/hectare has obvious advantages of economy and efficiency and though many foreign firms manufacture suitable for this work, sprinkling at 300-600 liters/hectare
authors of articles in this publica-

ATTACHED to
to insect control on sugar beets and corn

Card 1/2

L 50549-65

ACCESSION NR: AP5011493

adjusted for the fineness of the spray and for the wind force, and the expenditure of the liquid will vary with the type and the number of sprinklers. However, the system offers a considerable saving and should be investigated further.

PROKOPENKO, S.F.; GUBAREV, M.I.; SULTAN-SHAKH, Ye.G.; BURYI, Z.P.;
BURD, V.S.; YEFREMOVA, N.I.

Results of the development of blower-type sprayers for orchards.
Zashch.rast.ot vred.i bol. 7 no.5:20-21 My '62. (MIRA 15:11)
(Spraying and dusting equipment)

PROKOPENKO, S.F.; PODSHIVALOV, V.S.

Using blower-type sprayer in weed control in virgin lands.
Zemledelie 26 no. 4:41-43 Ap '64. (MIRA 17:5)

PROKOPENKO, S. F.

Practices in using concentrated solutions in orchards. Zashch.
rast. ot vred. i bol. 6 no.6:16-17 Je '61.

(MIRA 16:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sel'sko-
khozyaystvennogo mashinostroyeniya.

(Fruit—Diseases and pests)

(Spraying and dusting in agriculture)

PROKOPENKO, S.F.; PETRUKHA, Ye.I.; POPOVNINA, N.I.; KOBYLKO, B.G.

Low-volume surface spraying of sugar beet and pea fields. Zashch.
rast. ot vred. 1 bol. 8 no.1:28-29 Ja '63. (MIRA 16:5)
(Spraying and dusting in agriculture)

PROKOPENKO, S.F.; YEFREMOVA, N.I.; NASONOVSKAYA, Z.S.; KUZNETSOVA, Ye.G.;
MYSAK, G.Ya., inzh.; DOBROSINETO, Ye.I., inzh.

Spraying orchards with a small expenditure of liquids. Zashch.
rast. ot vred. i bol. 8 no.2:35 F '63. (MIRA 16:7)

1. Sotrudniki Vsesoyuznogo nauchno-issledovatel'skogo instituta
sel'skokhozyaystvennogo mashinostroyeniya (for Prokopenko,
Yefremova, Nasonovskaya). 2. Glavnyy agronom sovkhoza imeni
Lenina Moskovskoy obl. (for Kuznetsova). 3. Gosudarstvennoye
seriynno-konstruktorskoye byuro L'vovskogo soveta narodnogo
khozyaystva (for Mysak, Dobrosinets).
(Spraying and dusting in agriculture)

PROKOPENKO, S.F.; BURYI, Z.P.; BURD, V.S.; NEVOL'SKIKH, N.M.

A new model of blower-type sprayer for orchards. Zashch.rast.ot
vred.i bol. 5 no.2:11-12 F '60. (MIRA 15:12)
(Spraying and dusting equipment)
(Fruit—Diseases and pests)

USSR/General and Specialized Zoology - Insects. Harmful Insects and Acarids. Chemical Means of Control of Harmful Insects and Acarids. P

Abs Jour : Ref Zhur Biol., No 6, 1959, 25414

Author : Prokopenko, S.F.

Inst : -

Title : Recent Ventilator Sprinklers

Orig Pub : Zashchita rast. ot vredit. i bolezney, 1958, No 2, 15-17

Abstract : In the new sprinklers OKR and OVM the liquid is forced with a pump into the spraying apparatus and is transported in a powerful aerial stream to the cultivated surface of the plants. With the aid of OKR, orchard and field culturesscan be tilled, the extra root feeding of the plants may be conducted and the control of weeds by means of chemical solutions, emulsions and suspensions in usual and increased concentration may be carried on. It is assembled with DT-54, ZD-35 tractors and others.

Card 1/3

USSR/General and Specialized Zoology - Insects. Harmful Insects and Acarids. Chemical Means in the Control of Harmful Insects and Acarids. P

Abs Jour : Ref Zhur Biol., No 6, 1959, 25414

The stream of mist is directed with the aid of a steering wheel to various parts of the tree's crown; field cultures are sprayed with the aid of a side blast at a grip of 30-50 m in width. The volume of the reservoir is 1000 liters, the output of the pump is 100 liters in one minute, the pressure is 20 atm, the productive capacity of the ventilator is 20 thousand m³ per one hour, the general weight is 1.1 t, the length is 4.74 m. OVM sprays trees up to 7-8 m in height at high and middle rates of the liquid's output. Its mechanisms are set in motion by its own motor. The aerial stream from a slit like aperture forms a fan-shaped mist cover. The volume of the tank is 2000 liters, the pump is centrifugal with an output of 500 liters per minute at a 3 atm pressure, the productive capacity of the ventilator is 90,000 m³ per

Card 2/3

- 12 -

USSR/General and Specialized Zoology - Insects. Harmful Insects
and Acarids. Chemical Means in the Control of
Harmful Insects and Acarids.

P

Abs Jour : Ref Zhur Biol., No 6, 1959, 25414

hour, the general weight is 2.4 t, the length is 5.45 m.
Both machines passed state tests in 1959. -- V.F.
Dunskiy

Card 3/3

VOLKOV, Aleksandr Nikolayevich; GERASIMOV, B.A.; ZARING, P.V.; MUSHNIKOVA, K.S.; NIKIFOROV, A.M.; PROKOPENKO, S.F.; POPOV, S.D.; CHUVAKHIN, V.S.; MINENKOVA, V.R., red.; GOR', Z.D., tekhn.red.; GURZVICH, M.M., tekhn.red.

[Manual on controlling pests and diseases of farm crops] Posobie po bor'be s vrediteliami i bolezniami sel'skokhoziaistvennykh kul'tur. Izd.10, ispr. i dop. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1960. 615 p. (MIRA 13:11)
(Agricultural pests) (Plant diseases)

PROKOPENKO, S.F., inzh.; BURYI, Z.P., inzh.; OMELYUKH, Ya.K., inzh.;
SULTAN-SHAKH, Ye.G., inzh.

OVS orchard sprayer. Zashch. raat. ot vred. i bol. 6 no.3:19-20
Mr '61. (MIRA 15:6)

(Spraying and dusting equipment)

PROKOPENKO, S. F.

Blower-type sprayer for weed control in corn. Zashch. rast.
ot vred. i bel. 5 no.6:18-19 Je '60.

(MIRA 16:1)

(Weed control)
(Spraying and dusting equipment)
(Corn(Maize))

PROKOPENKO, S.F.; SNEGOVSKIY, I.F.

Types of machines for plant protection. Zashch. rast. ot
vred. i bol. 6 no.10:21-25 0 '61. (MIRA 16:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sel'skokhoz-
yaystvennogo mashinostroyeniya.
(Spraying and dusting equipment)

PROKOPENKO, S.F., kand.sel'skokhozyaystvennykh nauk

New blower-type sprayers. Zashch.rast.ot vred. i bol. 3 no.2:15-17
Mr-Apr '58. (MIRA 11:4)
(Spraying and dusting equipment)

PROKOPENKO, S.F.

An extended formula for determining the hourly capacity of dusters.
Sel'khoz mashina no.4:14-17 Ap '56. (MIRA 9:7)

1.Vsesoyuznyy nauchno-issledovatel'skiy institut sel'skokhozyastven-
nogo mashinostroyeniya.
(Spraying and dusting equipment)

PROKOPENKO, S.F.; YEFREMOVA, N.I.

For low volume spraying. Zashch. rast. ot vred. i bol. 9
no.5:25-27 '64. (MIRA 17:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut
sel'skokhozyaystvennogo mashinostroyeniya.

GLUSHKO, V.T.; PROKOPENKO, S.P.

Testing nonmetallic materials for stress-rupture strength and
creep under uniaxial compression. Zav. lab. 30 no. 6:744-746'64
(MIRA 17:8)

1. Filial instituta mekhaniki AN UkrSSR i Dnepropetrovsky gornyy
institut.

PROKOPENKO, V.

Happy voyage. Za rul. 20 no.5:3 of cover My '62. (MIRA 16:4)

1. Predsedatel' kvalifikatsionnoy komissii TSentral'nogo
morskogo kluba Dobrovol'nogo obshchestva sodeystviya armii,
aviatsii i flotu SSSR.

(Automobiles—Touring)

PROKOPENKO, V.

USSR/Radio - Batteries, Radio
Radiofication

Nov 45

"Radiofication of Points Without Electric Power,"
V. Prokopenko, 3 pp

"Radio" No 11

Presents design for radio station located in region where there is no wind or water power. Set is operated on storage batteries which are recharged by horse-driven 400-watt generator. Editor considers scheme workable from technical standpoint but sees economic snags. New batteries require 30-36 hours continuous charge. This would involve two or

153197

USSR/Radio - Batteries, Radio (Contd)

Nov 49

three horses working in shifts under constant supervision. Includes four diagrams.

153197

ASLIBEKYAN, F.S., inzh.; PROKOPENKO, V.A., inzh.

Modernization of machine tools. Mashinostroitel' no.7:21-22
J1 '59. (MIRA 12:11)

(Machine tools)

PROKOPENKO, V.A.

Problems of technical progress should be the center of attention of the Scientific Technological Society. Prom.stroi. no.10:55-56 '62. (MIRA 15:12)

1. Predsedatel' Kazakhskogo pravleniya nauchno-tekhnicheskogo obshchestva stroitel'noy industrii.

(Kazakhstan--Building--Technological innovations)

25(7)

SOV/117-59-7-10/28

AUTHORS: Aslibekyan, F.S., Prokopenko, V.A., Engineers

TITLE: Modernization of Machine Tools

PERIODICAL: Mashinostroitel', 1959, Nr 7, pp 21-22 (USSR)

ABSTRACT: The article contains information on the modernization of several machine tools carried out in 1958 at the zavod "Krasnyy Proletariy" ("Krasnyy Proletariy" Plant). The modernized machine tools are: a vertical milling machine "Fritz Werner" (model "2201"); a gear-cutting "Reinecker" and a "7417" slotting machine. The information includes a drawing of the modernized spindle assembly of the "Fritz Werner" (Figure 2); a diagram of the "Reinecker" with a pneumatic cylinder, which has replaced the initial screw for retracting the tool post, and eliminated the necessity to interrupt the gear cutting operation to retract the tool post after cutting every

Card 1/2

SOV/117-59-7-10/28

Modernization of Machine Tools

separate rim on multiple rim gears. There are
5 diagrams.

Card 2/2

PRONOPENKO, V.B., inzh.

Testing some types of shock absorbers for belt conveyors.
Sbor. trud. VNIINerud no.4:42-48 '65. (MIRA 18:11)

PROKOPENKO, V.G.

DECEASED

SEE ILC

PROKOPENKO, V. G.

Mining Engineering

Longwall mining on an incline. Gor. zhur. no. 8, 1952.

Monthly List of Russian Accessions. Library of Congress, November 1952. UNCLASSIFIED.

PROKOPENKO, V.I., podpolkovnik meditsinskoy sluzhby

Health education for personnel. Voen.-med. zhur. no.6:70-71 Je '61.

(MIRA 14:8)

(HEALTH EDUCATION)

BOYARSKIKH, G.K.; NIKONOV, V.F.; PROKOPENKO, V.I.; ROVNINA, L.V.; ROMANOV, F.I.;
YASTREBOVA, T.A.; SVERCHKOV, G.P.. nauchnyy red.; NEVEL'SHTEYN, V.I.,
vedushchiy red.; YASHCHURZHINSKAYA, A.B., tekhn.red.

[Key wells of the U.S.S.R.; Berezovo key well (Tyumen' Province)]
Berezovskaya opornaya skvazhina (Tiumenskaia oblast'). Leningrad
Gos. nauchno-tekhn. izd-vo nef. i gorno-toplivnoi lit-ry, Leningr.
otd-ia. 1962. 120 p. (Leningrad. Vsesoiuznyi neftianoi nauchno-
issledovatel'skii geologorazvedochnyi institut. Trudy, no.195)
(MIRA 15:12)

(Berezovo region (Tyumen' Province)—Geology)

PROKOPENKO, V.M.

Machine for rolling a pulley. Mashinostroitel' no. 5:29
My '64. (MIRA 17:7)

SUMIN, I.F.; PROKOPENKO, V.N.

Features of the electrification of mines, having steep seams being worked which are subject to sudden outbursts of coal and gas. Trudy MakNII 14. Vop. gor. elektromekh. no.5:220-248 '62. (MIRA 16:6)
(Electricity in mining)

PROKOPENKO, V.S.

Distribution by magnitude of jumps of magnetization intensity in
cylindrical iron films. Zhur. tekhn. fiz. 32 no.11:1404-1405 N
'62. (MIRA 15:11)

1. Krasnoyarskiy gosudarstvennyy pedagogicheskiy institut.
(Magnetization)

PROKOPENKO, V.S.; PUCHEROV, N.N.

Inelastic scattering of 6.9 Mev. protons by chromium isotopes.
Zhur. eksp. i teor. fiz. 44 no.1:148-150 Ja '63. (MIRA 16:5)

1. Institut fiziki AN UkrSSR.
(Protons—Scattering)

(Chromium—Isotopes)

KLYUCHAREV, A.P. [Kliuchariev, O.P.]; ORLENKO, B.F.; PROKOPENKO, V.S.; PUCHEROV,
N.N. [Pucherov, M.M.]

Scattering of 6.9 Mev. protons by Mg^{24} . Ukr. fiz. zhur. 7 no.9:1028
S '62. (MIRA 15:12)

1. Institut fiziki AN UkrSSR, Kiyev.
(Protons—Scattering) (Magnesium)

L 36341-66 EWT(m)/T/ENP(t)/ETI IJP(c) JD

ACC NR: AP6015777

(A,N)

SOURCE CODE: UR/0048/66/030/005/0832/0834

AUTHOR: Sivkov, N. I.; Prokopenko, V.S.; Pyn'ko, V. G.

43

ORG: Krasnoyarsk Pedagogical Institute (Krasnoyarskiy pedagogicheskiy institut);
Institute of Physics, Siberian Section, Academy of Sciences of the USSR (Institut
fiziki Sibirskogo otdeleniya Akademii nauk SSSR)

B

TITLE: Concerning magnetization reversal in single crystal iron films /Report,
Fifth All-Union Conference on Electron Microscopy held in Sumy 6-8 July 1965/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 5, 1966, 832-834

TOPIC TAGS: electron microscopy, magnetic domain structure, ferromagnetic film, iron

ABSTRACT: Two series of electron micrographs are presented showing variations of the domain structure of an iron film during magnetization reversal. The 800 Å thick film was evaporated at 10^{-4} mm Hg onto a freshly cleaved NaCl surface heated to 150-200° C. The film had two equivalent easy axes. In such a film magnetization reversal along an easy axis takes place by nucleation and growth of spike domains with 90° walls followed by appearance of a region of reversed magnetization, which grows by motion of the 180° walls. One series of electron micrographs shows the appearance of "steps" at the tip of a spike during the early stage of this process. The second series of elec-

Card 1/2

L 36341-66

ACC NR: AP6015777

tron micrographs shows passage of a 180° domain wall past an inhomogeneity in the film with the temporary formation of a triangular domain with 90° walls. These phenomena are discussed briefly. Orig. art. has: 3 figures.

SUB CODE: 20/

SUM DATE: 00/

ORIG REF: 000/

OTH REF: 001

Card 2/2

82491

S/048/60/024/007/025/032/YY
B019/B056

24.6600

AUTHORS: Zaika, N. I., Nemets, O. F., and Prokopanko, V. S.

TITLE: Spins and Parities of Ca^{41} Levels

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1960,
Vol. 24, No. 7, pp. 872-873

TEXT: This paper was read at the 10th All-Union Conference on Nuclear Spectroscopy, which took place in Moscow from January 19 to 27, 1960.

By means of a deuteron beam ($E_d = 13.6$ Mev) obtained from a cyclotron, the proton angular distribution in the reaction $\text{Ca}^{40}(d,p)\text{Ca}^{41}$ for the ground level and the excited levels at 1.95 and 2.42 Mev were studied. The angular distribution of protons from the reaction $\text{Ca}^{40}(d,p)\text{Ca}^{41}$ is shown in Fig. 1 ($Q = 6.14$ Mev, $l_n = 3$). In Fig. 2 the same is shown for $Q = 4.18$ Mev and $l_n = 1$, and in Fig. 3 for $Q = 3.69$ Mev and $l_n = 1$. The curves plotted were calculated according to Butler (Ref. 3), an interaction radius of

$a = 6.10^{-13}$ cm being assumed. As the quantum characteristic of the Ca^{40} level is 0^+ , the authors draw the conclusion that the quantum characteris-

Card 1/3

85591

Spins and Parities of Ca^{41} Levels

S/048/60/024/007/025/032/XX
B019/B056

tic of the two Ca^{41} states is $5/2$ or $7/2$; $1/2^-$ or $3/2^-$; and $1/2^-$ or $3/2^-$, respectively. The shell model indicates $7/2^-$, $3/2^-$, and $1/2^-$. There are 3 figures and 7 references: 3 Soviet, 3 US, and 1 British.

ASSOCIATION: Institut fiziki Akademii nauk USSR (Institute of Physics of the Academy of Sciences UkrSSR)

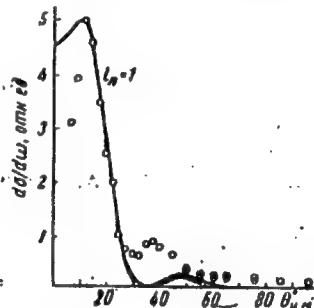


Рис. 3. Угловое распределение протонов из реакции $\text{Ca}^{40}(\text{d}, \text{p})\text{Ca}^{41}$; $Q = 3.69 \text{ MeV}$, $l_n = 1$

Card 2/3

85591

S/048/60/024/007/025/032/XX
B019/B056

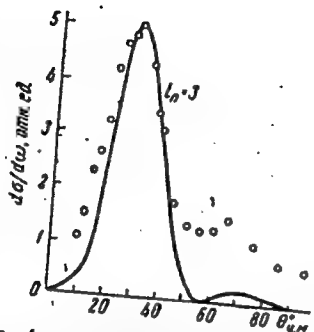


Рис. 1. Угловое распределение протонов из реакции $\text{Ca}^{40}(\text{d},\text{p})\text{Ca}^{41}$; $Q = 8.14 \text{ MeV}$, $l_n = 3$

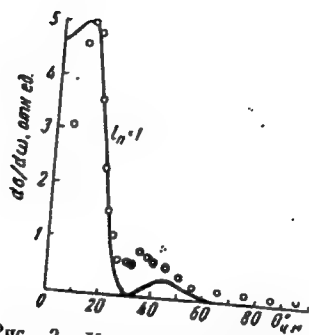


Рис. 2. Угловое распределение протонов из реакции $\text{Ca}^{40}(\text{d},\text{p})\text{Ca}^{41}$; $Q = 4.18 \text{ MeV}$, $l_n = 1$

Card 3/3

ZAYKA, N.I.; NEMETS, O.F.; PROKOPENKO, V.S.

Spins and parity levels of Ca^{41} . Izv. AN SSSR Ser. fiz. 24 no.7:
872-873 J1 '60. (MIRA 13:7)

1. Institut fiziki Akademii nauk USSR.
(Calcium--Isotopes)

L2219
S/057/62/032/011/013/014
B104/B102

AUTHOR: Prokopenko, V. S.

TITLE: The magnitude distribution of jumps in the magnetization of cylindrical iron films

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 32, no. 11, 1962, 1404-1405

TEXT: As already shown, the magnitude distribution of jumps in the magnetization during slow magnetic reversal differs considerably from the formula $N = N_0 \exp(-\lambda \Delta M)$ which holds in those cases where the change in the intensity of magnetization in a film is brought about by a displacement of the domain boundaries. ΔM is the magnitude of the jump, N the number of jumps larger than ΔM , and N_0 is the total number of jumps. The large jumps observed in the initial stages of magnetic reversal of cylindrical films could be due to a process of intensive nucleus formation. In a uniformly magnetized film of thickness d the nucleus formation in a field H , which is antiparallel to the magnetization J_s , is possible if

$2J_s H \Delta V \geq 2LJ_s^2 \Delta V + \gamma \Delta S$ (1). For spheroidal nuclei with axes $2r$ and

Card 1/2

The magnitude distribution of ...

S/057/62/032/011/013/014
B104/B102

d ($r \gg d/2$) the demagnetization factor is $L \approx \pi^2 d/2r$, the volume $\Delta V \approx \pi r^2 d$ and the boundary surface in the film formed along with the nucleus is $\Delta S \approx 2\pi r d$. Then (1) leads to: $r \geq \pi^2 J_s d/2H + \gamma/J_s H$ (2). This relation allows of estimating the maximum possible volume for the spheroidal nuclei $\Delta V_m = \pi d r_m^2$. Assuming that J_s and γ in films with $d = 5000 \text{ \AA}$ equal the values for massive iron $\Delta V_m \approx 10^{-8} \text{ cm}^3$. For volumes less than $3 \cdot 10^{-9} \text{ cm}^3$ no jumps in the intensity of magnetization were observed in the initial stages of magnetic reversal. Therefore the assumption of spheroidal nuclei of magnetic reversal appears justified. The largest jumps occur on magnetic reversal at the boundaries of the film; the averaged jumps are equal in the magnetic reversal in the midplanes of the film. This shows the existence of a minimum volume for the nuclei of magnetic reversal. There is 1 figure.

ASSOCIATION: Krasnoyarskiy gosudarstvennyy pedagogicheskiy institut
(Krasnoyarsk State Pedagogical Institute)

SUBMITTED: August 1, 1962

Card 2/2

S/056/65/044/001/028/067
B104/B144

24,6600

AUTHORS:

Prokopenko, V. S., Pucherov, N. N.

TITLE:

Inelastic scattering of 6.9 Mev protons by chromium isotopes

PERIODICAL:

Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 44, no. 1, 1963, 148-150

AS.

SUBMI.

TEXT: Free, thin Cr^{50,52,54} films (enriched to 87.7, 99.0, and 78.6% respectively) were used as targets. The proton energy was (6.9 ± 0.05) Mev, a CsI(Tl) scintillation spectrometer was used as detector, and the energy spectrum was taken by a 50-channel pulse-height analyzer. The absolute value of the differential cross section of inelastic scattering was fixed on the assumption that the elastic scattering through 200° was a pure Coulomb scattering. Measurements were made for scattering angles between 50 and 160°. The distribution (nearly symmetrical with respect to 90°) of inelastically scattered protons (protons related to the excitation of the first excited state of the three isotopes) shows that the formation of a compound nucleus plays an important part in the inelastic scattering of

Card 1/2

IVLEV, V.F.; PROKOPENKO, V.S.

Barkhausen effect in cylindrical iron films. Izv.vys.ucheb.
zav.;fiz. no.1:154-157 '62.
(MIRA 15:6)

1. Krasnoyarskiy pedagogicheskiy institut.
(Iron—Magnetic properties)

VAL'TER, A. K., akademik; KLYUCHAREV, A. P.; LUTSIK, V. A.; ORLENKO, B. F.;
PASECHNIK, M. V., akademik; PROKOPENKO, V. S.; PUCHEROV, N. N.

Elastic scattering of 6.9 Mev. protons by chromium and zinc
isotopes. Dokl. AN SSSR 147 no.6:1325-1327 D '62.
(MIRA 16:1)

1. Institut fiziki AN UkrSSR i Fiziko-tekhnicheskiy institut
AN UkrSSR. 2. AN UkrSSR (for Val'ter, Pasechnik).

(Protons—Scattering) (Chromium—Isotopes)
(Zinc—Isotopes)

84384

S/056/60/039/004/002/048
B004/B070

24.6520

AUTHORS:

Pasechnik, M. V., Pucherov, N. N., Orlenko, B. F.,
Prokopenko, V. S.

TITLE:

Polarization of 6.8-Mev Protons¹⁹ on Scattering From Carbon

PERIODICAL:

Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960,
Vol. 39, No. 4(10), pp. 915-916

TEXT: The purpose of the present work was to study the spin-orbit interaction in the elastic scattering of 6.8-Mev protons from carbon, and to examine the suitability of carbon as the second scatterer in polarizing instruments. The carbon target consisted of a polystyrene film filled with graphite powder. The thickness of the target was of the order of 10 mg/cm². The doubly scattered protons (second scattering angle = 45°) were recorded by means of 200μ thick Я-1 (Ya-1) nuclear photoplates. The data for the asymmetry of distribution observed experimentally after the second scattering are given in a Table. The considerable thickness of the target prevented the use of known data on the polarization of

Card 1/2

Polarization of 6.8-Mev Protons on
Scattering From Carbon

24384

S/056/60/039/004/002/048
B004/B070

protons at 45° . For this reason, only qualitative conclusions are drawn:
significant polarization of 6.8-Mev protons on scattering from carbon,
suitability of carbon as an analyzer in the study of polarization in this
energy range. The angular dependence of polarization on scattering from
carbon found by the authors agrees well with data for aluminum (Ref. 3).
There are 1 table and 4 references: 1 Soviet, 2 US, and 1 French.

ASSOCIATION: Institut fiziki Akademii nauk SSSR (Institute of Physics
of the Academy of Sciences of USSR)

SUBMITTED: April 15, 1960

Card 2/2

ACC NR: AP6033057 (N) SOURCE CODE: UR/0126/66/022/002/0312/0.13

AUTHOR: Markov, V. S.; Pak, N. G.; Prokopenko, V. S.; Vasil'yev, G. G.

ORG: Krasnoyarsk Pedagogical Institute (Krasnoyarskiy pedinstitut)

TITLE: Anisotropy dispersion, thickness and coercive force of ferromagnetic films

SOURCE: Fizika i metallov i metallovedeniye, v. 22, no. 2, 1966, 312-313

TOPIC TAGS: ferromagnetic film, magnetic coercive force, magnetic anisotropy, magnetic property

ABSTRACT: The authors study the interaction between H_c and the angular macrodispersions of anisotropy for alloy films containing 80% Ni, 17% Fe and 3% Mo, 200-900 Å thick. The films were produced by condensation in a vacuum on a glass substrate using tungsten wire vaporizers. The magnetic characteristics of the components and of the entire film were determined by the oscillographic local hysteresis loop method. The results show that angular macrodispersion of anisotropy may contribute to the coercive force of the films. The lack of macrodispersion control could account for the variation in experimental relationships between H_c and the thickness of the ferromagnetic film. Orig. art. has: 2 figures, 1 table.

SUB CODE: 20/ SUBM DATE: 07Sep65/ OTH REF: 003

Card 1/1

UDC: 539.216.2:538.248

L 15370-66 EWT(1)/EWP(e)/EWT(m)/T/EWP(t)/EWP(b) IJP(c) JD/GG

ACC NR: AP6804471

SOURCE CODE: UR/0048/66/030/001/0071/0074

AUTHOR: Markov, V.S.; Prokopenko, V.S.; Pak, N.G.; Vasil'yev, G.G.

ORG: Krasnoyarsk State Pedagogical Institute (Krasnoyarskiy gosudarstvennyy pedagogicheskiy institut)

TITLE: Oscilloscope display of the hysteresis loops of separate parts of a film
/Transactions of the Second All-Union Symposium on the Physics of Thin Ferromagnetic
Films held at Irkutsk 10 July to 15 July, 1964

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v.30, no. 1, 1966, 71-74

TOPIC TAGS: ferromagnetic film, magnetic thin film, Faraday effect, Kerr effect, hysteresis loop, magnetic anisotropy,

ABSTRACT: Equipment employing the Faraday or Kerr effect is described with which one can display on an oscilloscope screen the hysteresis loop of a small region of a ferromagnetic film. In the authors' apparatus a spot of polarized light from several millimeters to several tens of microns in diameter was focused on the investigated film and the reflected or transmitted light (depending on the thickness of the film) was collected, passed through an analyzer, and focused on a photomultiplier. The signal from the photomultiplier was applied to the vertical axis of an oscilloscope, to the horizontal axis of which there was applied a signal proportional to the magnetizing field. A number of exploratory experiments were performed and hysteresis loops are

Card 1/2

L 15370-66

ACC NR: AP6004471

presented. By recording both the longitudinal and transverse hysteresis loops with different orientations of the film it is possible to map the direction of the anisotropy axis in different parts of the film. The accuracy with which the direction of the local anisotropy axis can be determined is at least great as can be obtained with the technique of D.O.Smith (J. Appl. Phys., 32, 70 (1961)), which requires observation of the domain structure. Orig. art. has: 8 figures.

SUB CODE:

20

SUBM DATE:

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ORIG. REF:

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OTH REF: 001

TS
Card 2/2

PROKOPENKO, V.S...

Anisotropy of films deposited on cylindrical backings. Izv.
AN SSSR. Ser.fiz. 30 no.1:75-76 Ja '66.

(MIRA 19:1)

1. Krasnoyarskiy gosudarstvennyy pedagogicheskiy institut.

ZAIIKA, N.I.; NEMETS, O.F.; PROKOPENKO, V.S.

Angular distribution of protons from the reaction $\text{Ca}^{40}(\text{d}, \text{p})\text{Ca}^{41}$.
Zhur. eksp. i teor. fiz. 38 no.1:287-289 Jan '60. (MIRA 14:9)
(Protons) (Nuclear reactions) (Calcium--Isotopes)

VAL'TER, A.K.; ZALYUBOVSKIY, I.I.; KLYUCHAREV, A.P.; LUTSIK, V.A.; ORLENKO, B.F.; PASECHNIK, M.V.; PROKOPENKO, V.S.; PUCHEROV, N.N.

Angular distribution of 6.8 mev. protons elastically scattered on nickel and zirconium isotopes. Zhur.eksp.i teor.fiz. 41 no.1:71-74 J1 '61. (MIRA 14:7)

1. Institut fiziki AN Ukrainskoy SSR i Fiziko-tekhnicheskiiy institut AN Ukrainskoy SSR.
(Protons—Scattering) (Nickel—Isotopes) (Zirconium—Isotopes)

24,2200

36:97
S/139/62/000/001/026/032
E032/E114

AUTHORS: Ivlev, V.F., and Prokopenko, V.S.
TITLE: On the Barkhausen effect in cylindrical iron films
PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy,
Fizika, no.1, 1962, 154-157

TEXT: The authors report a study of the statistical distribution of Barkhausen pulses for slow magnetisation reversal in cylindrical iron films obtained by vacuum evaporation. The technique used in the measurements was essentially the same as that reported by the first of the present authors in a previous paper. The sensitivity of the apparatus was such that it was possible to record magnetisation discontinuities within film volumes greater than $1.2 \times 10^{-9} \text{ cm}^3$. The results reported in the present paper refer to films 5000 Å thick and deposited on glass fibres 0.3 mm in diameter. The rate of magnetisation was 0.08 oersted/sec. It was found that the magnitude of the Barkhausen pulses could be described by a formula of the form

$$N = N_0 A e^{-kM^{1/n}} \quad (2)$$

Card 1/3

On the Barkhausen effect in ...

S/139/62/000/001/026/032
E032/E114

where M is the magnitude of the magnetisation discontinuity and N is the number of such discontinuities greater than M . This formula was originally reported by N. Ford and E. Pugh, for FeNi. It was found that, beginning with a field of 39.50 oe, when 80% of the material had been remagnetised, the distribution of the discontinuities could be described by a formula of the form:

$$N = N_0 e^{-\lambda M} \quad (1)$$

where N_0 is the number of discontinuities of all sizes recorded above 39.5 oe. Finally, a plot of $\ln [H_K - H] / (H_K - H_0)$ versus $\ln (1 - N/N_0)$ was found to consist of two straight lines of slightly different slopes joined together at a point corresponding to 39.5 oe. In the above expressions H_K is the anisotropy field, H_0 is the field for the formation of the first "nucleus", N_0 is the possible number of "nuclei" in the interval $H_K - H_0$, and p is the probability density for the formation of a "nucleus" in the film which is constant in the remagnetisation region. It is therefore concluded that it is possible to look

Card 2/3

On the Barkhausen effect in ... S/139/62/000/001/026/032
upon each Barkhausen jump as the formation in the film of a
nucleus with the reverse direction of magnetisation.
There are 4 figures. E032/E114

ASSOCIATION: Krasnoyarskiy pedinstitut
(Krasnoyarsk Pedagogical Institute)

SUBMITTED: October 10, 1960

Card 3/3

IVLEV, V.F.; PROKOPENKO, V.S.

Nucleus formation and Barkhausen effect in ferromagnetic films.
Izv.AN SSSR.Ser.fiz. 25 no.5:606-609 My '61. (MIRA 14:5)

1. Krasnoyarskiy gosudarstvennyy pedagogicheskiy institut.
(Metallic films--Magnetic properties)

PASECHNIK, M.V. [Pasichnyk, M.V.]; ORLENKO, B.F.; PROKOPENKO, V.S.;
CHIRKO, V.I. [Chyrko, V.I.]

Scattering of protons by tin isotopes. Ukr. fiz. zhur. 6 no.3:425-
426 My-Je '61. (MIRA 14:8)

1. Institut fiziki AN USSR, g. Kiyev.
(Protons--Scattering)
(Tin--Isotopes)

24,2200

2577
S/048/61/025/005/011/024
R117/8201

AUTHORS: Ivlev, V. E., and Prokopenko, V. S.

TITLE: Formation of nuclei and Barkhausen effect in ferromagnetic films

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya Fizicheskaya.
v. 25, no. 5, 1961, 606-609

TEXT: The present investigation was the subject of a lecture delivered at a symposium on thin ferromagnetic films (Krasnoyarsk July 4 to 7, 1960). Cylindrical iron films were examined with a view to clarifying the relationship between the process of the formation of nuclei and the Barkhausen effect in ferromagnetic films. The production technique differed somewhat from the usual procedure (Ref. 7: Blois M., J. Appl. Phys., 26, 975 (1955)). The vaporizer was an iron solenoid fastened inside an evacuated glass chamber with the aid of a mica holder. The film was sputtered onto a glass thread strained along the solenoid axis. The glass thread was first degreased and then cleaned by gas discharge at a pressure of $\sim 10^{-2}$ mm Hg. At the beginning of evaporation the pressure

Card 1/6

Formation of nuclei and Barkhausen...

25797

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B117/B201

in the vacuum chamber did not exceed $8 \cdot 10^{-6}$ mm Hg. When heating the solenoid with direct current, uniaxially anisotropic films resulted, whose axes of easiest magnetizing coincided with the solenoid axis. The field created by the vaporizer amounted to at most 20 oe at the film surface. The investigation method was on principle the same as is usually applied to the study of the Barkhausen effect in massive ferromagnetic substances (Ref. 8: V. F. Ivlev. Izv. AN SSSR. Ser. fiz., 16, 664 (1952)). A broad-band standard amplifier of the type YU-10 (USh-10) served as the main amplifier. The sensitivity of the system allowed safely to detect magnetization jumps in film volumes of over $1.2 \cdot 10^{-9}$ cm³. Investigation results are given for films 5000 Å thick, that were sputtered onto a thread 0.3 mm in diameter. Films were subjected to magnetic reversal along the axis of their easiest magnetizing with a field changing at a rate of 0.02 oe sec⁻¹. Jumps were observed twice, in field intervals $\pm 36 \div 49$ oe, during one cycle, with a rise of the absolute field value. On a complete magnetic reversal of the films concerned, the resulting distribution of the type

$$N = N_0 A \exp(-kM^{1/n}) \quad (2)$$

Card 2/6

25797

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B117/B201

Formation of nuclei and Barkhausen...

is valid (M - magnitude of the magnetization jump; N_0 - total number of jumps; N - number of jumps of a large M ; λ , k , n , and A - constant quantities). It was established from the statistical distribution of differently large jumps (Fig. 3) that the distribution character of magnetization jumps in the film changes in magnitude during magnetization. Beginning with a field of 39.5 oe, when already 80 % of the film substance has undergone magnetic reversal, the distribution of jumps takes place according to formula (1)

$$N = N_0 \exp(-\lambda M) \quad (1)$$

(Fig. 4, where N'_0 is the number of jumps established after the field of 39.5 oe has been applied). Such a distribution character of the jumps over the field is difficult to explain on the basis of the model offered in Ref. 1 (Ford N., Pugh E., J. Appl. Phys. (S), 30, 270 (1959)), as this model ignores the process of formation of nuclei completely. Under the premise that all jumps observed in the magnetic reversal of the film are dependent upon the process of formation of nuclei, the distribution diagram of the number of jumps in the field must be a straight line in coordinates $\ln(1 - \frac{N}{N_0})$ and $\ln(H_k - H)/(H_k - H_0)$. Such a diagram,

Card 3/6

Formation of nuclei and Barkhausen...

25797

S/048/61/025/005/011/024
B117/B201

constructed on the basis of results obtained, is presented in Fig. 5. The field of 39.5 oe corresponds to the salient point. The differing values of p for the two sections of the straight line point to different conditions of formation of the magnetization jumps below and above the 39.5 oe field. Once the process of magnetic reversal is over, distribution (1) is valid, which is characteristic of the magnetic reversal by the displacement of a boundary. This happens possibly with the magnetic reversal of cylindrical films: the ring-shaped boundary formed by the nuclei diffusing into one another is moving. The fact that the magnetization jumps observed in this connection are distributed over the field in a similar way as the nuclei of magnetic reversal allows the statement to be made that on a displacement of the boundaries in the film the magnetization jumps depend upon the formation of nuclei directly at the boundaries. It is possible in this way to compare every Barkhausen jump to the formation of a nucleus of inverse magnetization. On a faster growth of the field causing magnetic reversal the total number of jumps during one cycle increases (Fig. 6). This could prove to be to the same extent a consequence of an increase of the number and an increase of the size of the nuclei of magnetic reversal in films with a quicker change of the field. There are 6 figures and

Card 4/6

Formation of nuclei and Barkhausen....

25797
S/048/61/025/005/011/024
B117/B201

9 references: 1 Soviet-bloc and 8 non-Soviet-bloc.

ASSOCIATION: Krasnoyarskiy gos. pedagogicheskiy institut (Krasnoyarsk State Pedagogical Institute)

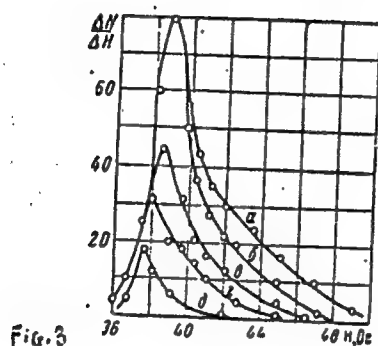


Fig. 3

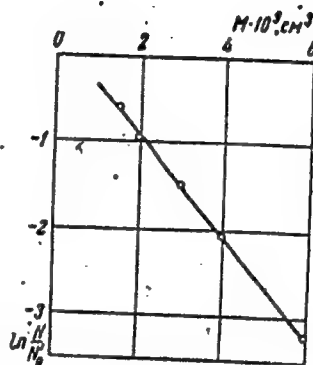


Fig. 4

Card 5/6

1 00700-6/ EMP(m)/EMP(t)/EMI IJP(c) JD/JG

ACC NR: 426020136

SOURCE CODE: UR/0048/66/030/006/1068/1069

AUTHOR: Begtyarev, I.F.; Prokopenko, V.S.; Vasil'yev, G.G.

ORG: Krasnoyarsk Pedagogic Institute (Krasnoyarskiy pedagogicheskiy institut);
Krasnoyarsk Agricultural Institute (Krasnoyarskiy sel'skokhozyaystvennyy institut)

TITLE: Determination of the domain wall energy in ferromagnetic films [Report, All-Union Conference on the Physics of Ferro- and Antiferromagnetism held 2-7 July 1965 in Sverdlovsk]

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya. v. 30, no. 6, 1966, 1068-1069

TOPIC TAGS: ferromagnetic film, iron, Permalloy, molybdenum containing alloy, magnetic domain boundary

ABSTRACT: Domain wall energies in 1000 Å thick iron and 17 Fe-80Ni-3Mo Permalloy films, vacuum deposited at 10^{-5} mm Hg with uniaxial anisotropy induced by inclination of the substrate to the molecular beam were determined by artificially inducing in them regions of reverse magnetization with the aid of a nonuniform field and calculating the wall energy from the shape of the region by minimizing the sum of the magnetostatic energy and the wall energy. Reverse magnetization regions of two different types were obtained, depending on the field configuration. The shapes of the two types of regions were approximated for the calculations by ellipsoids and elliptic cylinders, respectively. The wall energies obtained from the regions of the different

Card 1/2

L 08769-67

ACC NR: A26029136

3
types differed by less than 6%. The wall energies obtained for an iron film with an anisotropy field of 24 Oe, for an iron film with an anisotropy field of zero, and for an Mo Permalloy film with an anisotropy field of 11.2 Oe, were 6.8, 2.3, and 0.71 erg/cm², respectively. Orig. art. has: 7 formulas and 1 table.

SUB CODE: 20

SUBM DATE: 00

ORIG. REF: 000

OTH REF: 002

Card 2/2 bc

FERDINAND, Ya.M. (Rostov-na-Donu); Primali uchastiye: MARISOVA, A.P.;
BRAYNINA, R.A.; MARGULIS, L.A.; MYASNENKO, A.M.; KOVALEVSKAYA,
I.L.; TELESHEVSKAYA, E.A.; SOPOLEVA, S.V.; KALININA, K.I.;
KOVALEVA, N.S.; IVANOVA, M.K.; ARENDER, B.A.; KUCHERENKO, R.A.;
MANATSKOVA, K.S.; OLEYNIKOVA, L.T.; KIBARDINA, Yu.A.;
GRIGOR'YEVA, K.S.; SEMENIKHINA, L.G.; CHERNYKH E.I.; DOROFYEVA,
V.M.; SHEVCHENKO, Ye.N.; ABRAMOVA, O.K.; SKUL'SKAYA, S.D.;
PETROVA, Z.I.; MAKHLINOVSKIY, L.I.; KUZ'MINA, A.I.; AL'TMAN, R.Sh.;
MARDERER, R.G.; YENGALICHEVSKAYA, L.N.; CHIRKOVA, M.V.; TERESHCHENKO,
N.I.; SHELKOVNIKOVA, M.A.; PROKOPENKO, V.V.; BEKLEMESHEVA, Ye.2.;
BARANOVA, T.V.

Effectiveness of specific prophylaxis with alcohol divaccine
against typhoid and paratyphoid B fever in school-age children.
Zhur. mikrobiol., epid. i immun. 41 no.1:23-27 Ja '64.

(MIRA 18:2)

L 57547-65 EWT(m)/EPF(c)/EWP(v)/EPR/EWP(j)/T Pc-4/Pr-4/Ps-4 WH/RM
ACCESSION NR: AP5016884

UR/0374/65/000/003/0063/0067
678:532.096

AUTHOR: Malinskiy, Yu. M. (Moscow); Prokopenko, V. V. (Moscow); Kargin, V. A. (Moscow)

TITLE: Temperature dependence of the strength of adhesive joints involving crystalline polymeric adhesives ¹⁵

SOURCE: Mekhanika polimerov, no. 3, 1965, 63-67 ⁴⁵
_B

TOPIC TAGS: adhesive, adhesive strength, adhesive joint, polymer, crystalline polymer

ABSTRACT: A study has been made of the temperature dependence of the strength of adhesive bonds involving crystalline polymers. Adhesive joint specimens were prepared using steel or duralumin substrates and the "adhesive" was further identified as

Card 1/2

adhesive in about half of the

L 57547-65

ACCESSION NR: AP5016884

specimens and cohesive in the other half. Curves of adhesive strength versus temperature go through two peaks, one near the glass-transition temperature (T_g) of the adhesive and the other near its melting point (T_m). The peak near T_g was considered as confirming the significant effect of passage through the glass region

ASSOCIATION: none

SUBMITTED: 11Jan65

ENCL: 00

SUB CODE: MT

NO REF SOV: 008

OTHER: 000

ATD PRESS: 4039

Card

2/2

15 2600
15 1120

33389

S/190/62/004/002/020/021
B101/B110

AUTHORS: Malinskiy, Yu. M., Prokopenko, V. V., Kargin, V. A.
TITLE: Effect of the relaxation rate on the strength of adhesive joints
PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 4, no. 2, 1962, 299-303

TEXT: The authors studied the dependence of strength of the joint glass - polyvinyl acetate (PVA) - glass on the temperature and the plasticizer content of the polymer (dibutylphthalate, DBP). The specimens consisted of an oblique glass parallelepiped (Fig. 1). 20% acetic solution of PVA was applied to the glass surface and then dried at room temperature on air for 40 min. These glass surfaces were then pressed together with a pressure of 10 kg/cm^2 at 80°C . The glue layer was 0.01 - 0.04 mm thick and had no effect on the strength. The strength was measured by loading a cylinder in the cuneiform groove ($d = 1.76 \text{ mm}$). The results (Fig. 2) are explained by the fact, that above the vitrification temperature the polymer strength decreases, however, the relaxation rate increases. Thus the

Card 1/2

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B101/B110

Effect of the relaxation ...

strength reaches a maximum somewhat below the vitrification temperature. With increasing plasticizer content the vitrification temperature decreases linearly. This could also be proved by thermomechanical experiments with PVA films. The extremum is characteristic of the inhomogeneous stress distribution. A. P. Aleksandrov, S. N. Zhurkov, G. M. Bartenov, V. Ye. Gul', G. A. Patrikeyev, and B. I. Panshin are mentioned. There are 5 figures, and 8 references: 5 Soviet and 3 non-Soviet. X

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova (Physico-chemical Institute imeni L. Ya. Karpov)

SUBMITTED: February 16, 1961

Fig. 1: Schematical representation of specimen testing



Card 2/2 2

MALINSKIY, Yu.M.; PROKOPENKO, V.V.; KARGIN, V.A.

Effect of relaxation rate on the strength of adhesive joints.
Vysokom.sped. 4 no.2:299-303 F '62. (MIRA 15:4)

1. Fiziko-khimicheskiy institut im. L.Ya.Karpova.
(Adhesion) (Strains and stresses) (Polymers)

PLATE, H.A.; PROKOPENKO, V.V.; KARGIN, V.A.

Polymerization of certain monomers during the dispersion of
inorganic substances. Vysokom.soed. 1 no.11:1713-1720 H
'59. (MIRA 13:5)

1. Khimicheskiy fakul'tet Moskovskogo gosudarstvennogo universiteta
imeni M.V. Lomonosova.
(Polymerization) (Styrene) (Methacrylic acid)

L 12461-65 EWT(m)/EPF(c)/EPR/EWP(j)/T/ENP(v) Pc-4/Pz-4/Ps-4 AFETR WJ/PM

ACCESSION NR: AP4047212

S/0190/64/006/010/1832/1837

AUTHOR: Malinskiy, Yu. M.; Prokopenko, V. V.; Kargin, V. A.

TITLE: The nature of extremal dependence of the strength of adhesive bonds and polymeric materials on the temperature and deformation rate

SOURCE: Vy*sokomolekulyarny*ye soyedineniya, v. 6, no. 10, 1964, 1832-1837

TOPIC TAGS: adhesive, polyvinyl acetate, adhesive bond strength

ABSTRACT: A study has been made of the effect of the loading rate and adhesive-film thickness on the temperature dependence of adhesive bond strength (ABS). The ABS tests were carried out by a previously described method with glass-poly(vinyl acetate) or corundum-filled poly(vinyl acetate) or BF-4² glass specimens (BF-4 is a phenol-formaldehyde-poly(vinyl butyral) resin). ABS versus temperature curves showed a maximum near the glass transition temperature (T_g). An increase in the loading rate shifted the temperature (T_{max}) of maximum ABS upward. This was in good agreement with published data on T_g versus loading rate, confirming the role of relaxation, which determines T_g, in the ABS rise in the vicinity of T_g. A decrease in the adhesive-film thickness also shifted T_{max} upward. The observed

Card 1/2

L 12461-65

ACCESSION NR: AP4047212

extremal temperature dependence of ABS was attributed to nonuniform stress distribution in the seam; this was thought to hold true in general for polymeric adhesives exhibiting adhesive or cohesive failure. Such nonuniformity may be due to partial crystallization, filler, a cut in the specimen, specimen shape, or loading conditions. Orig. art. has: 7 figures.

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova (Physicochemical Institute)

SUBMITTED: 09Dec63

ATD PRESS: 3123

ENCL: 00

SUB CODE: GC, MT

NO REF SOV: 015

OTHER: 005

Card 2/2

PROKOPENKO, Ye.G.; LAPSHIN, V.V.

Fluidized bed spraying of low pressure polyethylene. Plast.massy
no.8:26-29 '61. (MIRA 14:7)
(Polyethylene) (Protective coatings)

L 26382-66 EWP(j)/EWP(k)/EWT(d)/EWT(m)/EWP(h)/I/EWP(l)/EWP(v)/EWP(z) IJP(c)
ACC NR: AP6007726 RM/WW/JD/HW SOURCE CODE: UR/0413/66/000/003/0139/0139

AUTHORS: Markov, D. A.; Prokopenko, Yu. K.; Khachikyan, V. M.; Krol', V. M. 43
B

ORG: none

TITLE: Device for preparing stocks of cellular blocks. Class 75, No. 178711.

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 3, 1966, 139

TOPIC TAGS: machine part, adhesive material, cutting tool, honeycomb structure

ABSTRACT: This Author Certificate describes a device for the preparation of cellular blocks. The device includes the core, a system of drums, cutting knives, a reservoir for gluing compounds, and a glue-applicator attachment. The glue applicator is made in the form of a rotating roller drum consisting of two full cylinders placed one inside the other. This arrangement permits simultaneous regulation of the thickness and width of all glued strips in the process of their application to, for example, foil (see Fig. 1).

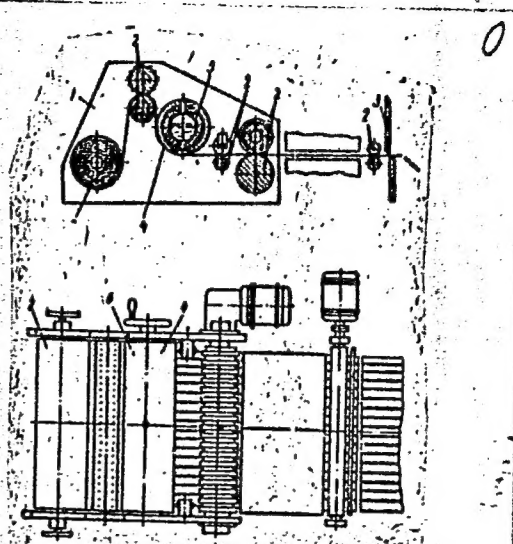
Card 1/2

UUC: 667.661:3

L 26382-66

ACC NR: AP6007726

Fig. 1. 1 - core; 2 - drum; 3 - knife;
4 - outer cylinder; 5 - inner cylinder;
6 - rotating drum.



Orig. art. has: 1 figure.

SUB CODE: 14, 11/ SUBM DATE: 31Aug64

Card 2/2 CC

PROKOPENKO, Yu.Ya., aspirant; LISTOV, P.N., prof., doktor tekhn. nauk,
nauchnyy rukovoditel'

Analyzing the thermal and technical characteristics of heat
accumulating heaters. Izv. TSKHA no.5:191-209 '63.

(MIRA 17:7)

PROKOPENKO, Yu.Ya., inzh.

Use of electrically conductive polymer films for heating baby chicks. Mekh.i elek.sots.sel'khoz. 20 no.4:36-38 '62.

(MIRA 15:8)

1. Moskovskaya sel'skokhozyaystvennaya akademiya imeni K.A. Timiryazeva.

(Poultry houses and equipment) (Polymers--Electric properties)

KONYAYEV, Petr Grigor'yevich; PROKOPENKO, Z.T., red.; KOTLYARENKO,
V.A., tekhn.red.

[In upper layers of the atmosphere] V verkhnikh sloiakh
atmosfery. Belgorod, Belgorodskoe knizhnoe izd-vo, 1959.

60 p.

(MIRA 13:3)

(Artificial satellites)

(Atmosphere, Upper--Rocket observations)